THOMAS P. GORDON
COUNTY EXECUTIVE

JOSEPH J. FREEBERY
GENERAL MANAGER

DEPARTMENT OF SPECIAL SERVICES

May 21, 2002

John Lovell
Pretreatment Coordinator
US EPA Region III
1650 Arch Street
Philadelphia, PA 19103-2029

RE: Pretreatment Program Local Limits Submission.
NPDES Permit No DE0050547

Dear Mr. Lovell:

Thank you for your letter regarding the New Castle County pretreatment program, in which you found the most recent submittal of the MOT proposed local limits to be acceptable, but you outlined specific comments regarding the proposed local limits and the calculated MAHC/MAHL. The County has reviewed these comments and will address each comment in our response outlined below:

POINT #1 MAHL/MAHC

We understand that future evaluations of the program will be based on the MAHC determined from our most recent local limits submittal. We have reviewed the MAHC calculations and are addressing the MAHC issue in our response to your comments regarding the MOT 2001 annual pretreatment report. To avoid any confusion the County will not integrate the new MAHC's into our program until the new regulations and limits have been approved and implemented.

POINT #2 Removal Rates and Limit Calculations

The DNREC permit limit for lead is 0.15 mg/l, but the County's original calculation for the lead local limit was based on the SDWA criteria of 0.05 mg/l. We now assume that since the receiving stream is not a public water supply that the SDWA criteria will not apply in this case and the facilities DNREC permit limit of 0.15 can be used. With this assumption in mind, and using the DNREC permit limit, we have calculated the local limit and MAHC for lead. As shown on the enclosed sheet, the calculated limit for lead is 26.59 mg/l using the MOT permit limit of 0.15. This translates to a calculated MAHC of 0.872 mg/l. Even though the calculated limit for lead is 26.59 mg/l, the County proposes to set the local limit for lead at 3.0 mg/l and the calculated MAHC of 0.872 mg/l will be based on permit limit criteria.

187A OLD CHURCHMANS ROAD, NEW CASTLE, DE 19720 PHONE: 302-395-5700 FAX: 302-395-5797

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POINT #3 Zinc Removal Rates

The County has reviewed the calculations based on the 6% removal rate and we agree that the new data will provide a much lower calculated limit of 7.09 mg/l. The proposed limit for Zinc will remain as previously submitted at 1.00 mg/l. Please refer to the enclosed sheets for our calculations.

POINT #4 Zinc in Alum

The MAHC of 0.2936 mg/l based on 6% removal rate has been confirmed by our calculations. The County intends on using the proposed zinc limit of 1.00 mg/l when the local limits are adopted into the amended pretreatment regulations. Please refer to the enclosed sheets for our calculations. The alum used as the coagulant the MOT phosphorus removal system will continue to be used until a suitable alternative can be found. The County will research alternatives for alum coagulant with lower zinc levels that are suitable for the current coagulation/filtration system design. If a suitable alternative is found and tested in the current system design, the County will contact a vendor to set up use of the new coagulant.

POINT #5 Phosphorus limit

The County will perform a study to determine the actual removal rate of phosphorus through the treatment plant and will also perform testing of the currently permitted industries effluents to determine if these facilities make a significant contribution of phosphorus. The updated data will be used to provide a representative limit for Phosphorus.

POINT #6 Ammonia and Phenolics limits

The County will collect influent and effluent samples for Ammonia and Phenolics for inclusion in the annual report. The data collected will also be used to determine the removal rates for both constituents and then used to determine, if necessary, an updated limit for each constituent.

Point #7 Adoption of regulation into ordinance

The County is proposing to amend the ordinance and the update the Industrial Pretreatment Regulations based on the approved MOT proposed limits as well as the City of Wilmington local limits once they are approved. The approved local limits will be adopted in the ordinance of each municipality in the MOT and City of Wilmington service areas. We understand the EPA can begin the public notice and formal approval process once the updated ordinances have been forwarded to your office.

John Lovell
Pretreatment Program Local Limits Submission.
NPDES Permit No DE0050547

Should you have any questions or require further information on this matter, please contact David Bowie at (302) 395-5728.

Sincerely,

James D. Houston
Environmental Compliance Manager

cc: J. Husband/T. Surles, NCC
K. Branner, Town of Middletown, encl
Peder Hansen, DNREC, encl.
David Bowie, NCC, encl.

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MOT PROPOSED LOCAL LIMITS

(mg/l)	CURRENT LIMITS	PROPOSED LIMITS(mg/l)
Al	1.50	NONE
As	1.00	1.00
Be	0.0070	NONE
Cd	0.015	0.015
CrVI	0.50	0.50
Cr (T)	1.50	1.50
Cu	0.15	1.00
Cn (T)	0.30	NONE
FE	NONE	NONE
Pb	0.50	3.00
Hg	0.001	0.001
Mo	NONE	NONE
Ni	0.02	1.00
Se	0.25	NONE
Ag	0.015	0.015
Tl	5.00	NONE
Zn	1.00	1.00
NH4	35	35
TKN	N/A	15
P	N/A	45
PCB	0.0001	ND
Phenol	10	10
BOD	350	350
TSS	500	500

NON-DOMESTIC EFFLUENT LIMITS

Metal	Present Limits (mg/l)	Influent (mg/L)	Effluent (mg/L)	% Removal	Allowable Effluent Conc. (mg/L)	Allowable Influent Conc.(mg/l)	Total Influent Flow (MGD)	Industrial Influent Flow (MGD)	Domestic Flow (MGD)
Aluminum	1.50	N/A		N/A					
Arsenic	1.00	0.002	0.001	16.7%	0.050	0.0600	0.5	0.016	0.484
Beryllium	0.007	N/A							
Cadmium	0.16	0.016	0.012	25.0%	0.010	0.0133	0.5	0.016	0.484
Chromium (VI)	0.50	N/A		70.0%	0.016	0.0533	0.5	0.016	0.484
Chromium (T)	1.50	0.154	0.039	74.7%	4.000	15.79	0.5	0.016	0.484
Copper	0.15	0.062	0.018	71.0%	0.046	0.1584	0.5	0.016	0.484
Cyanide	0.30	N/A							
Iron	NONE								
Lead	0.50	0.058	0.010	82.8%	***0.150***	0.8721	0.5	0.016	0.484
Mercury	0.001	0.0002	0.0001	50.0%	0.000091	0.0002	0.5	0.016	0.484
Molybdenum	NONE	0.038							
Nickel	0.02	0.071	0.028	60.6%	0.100	0.2536	0.5	0.016	0.484
Selenium	0.25	N/A							
Silver	0.02	N/A	N/A	85.0%	0.001	0.0067	0.5	0.016	0.484
Thallium	5.00	N/A							
Zinc	1.00	0.100	0.206	***6.0%***	0.276	0.2936	0.5	0.016	0.484

1997 Data

Underlined values indicate parameter was below detection limit.

NON-DOMESTIC EFFLUENT LIMITS

Metal	Allowable Influent Conc. (mg/l)	Allowable Influent Load (lbs/day)	Domestic Concentration. (mg/l)	Domestic Load (lbs/day)	Allowable Industrial Load (lbs/day)	Allowable Industrial Conc. (mg/l)
Aluminum	N/A					N/A
Arsenic	0.060	0.250	0.0250	0.101	0.149	1.12
Beryllium						
Cadmium	0.013	0.056	0.0126	0.051	0.005	0.04
Chromium (VI)	0.053	0.222	0.0000	0.000	0.222	1.67
Chromium (T)	15.795	65.865	0.0590	0.238	65.626	491.80
Copper	0.158	0.661	0.0520	0.210	0.451	3.38
Cyanide						
Iron						
Lead	0.872	3.637	0.0220	0.089	3.548	26.59
Mercury	0.000182	0.001	0.0001	0.000404	0.00036	0.0027
Molybdenum						
Nickel	0.254	1.057	0.1370	0.553	0.504	3.78
Selenium						
Silver	0.007	0.028	0.0050	0.020	0.008	0.057
Thallium						
Zinc	0.294	1.224	0.0690	0.279	0.946	7.09

Numbers checked per Lovel Feb 22, 2002 letter

	CALCULATED	CURRENT	PROPOSED
Lead	26.59	0.50	3.00
Zinc	7.09	1.00	1.00

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JOSEPH J. FREEBERY
GENERAL MANAGER

DEPARTMENT OF SPECIAL SERVICES

February 8, 2002

John Lovell
Pretreatment Coordinator
US EPA Region III
1650 Arch Street
Philadelphia, PA 19103-2029

RE: Pretreatment Program Local Limits Submission.
NPDES Permit No DE0050547

Dear Mr. Lovell:

Thank you for your letter regarding the New Castle County Pretreatment Program Local Limits submission, in which you outlined specific comments regarding the status of the submittal. The County has reviewed these comments and will address each comment in our response outlined below:

POINT #1 Removal Rates for Chromium, Copper and Lead

As requested in your recent response, we have provided in Table D1 the influent and effluent data that was used to calculate the removal rates for metals at the MOT facility including the removal rates for Cr (T), Cu and Pb. The removal rates used to calculate the local limits in the MOT local limit submissions and subsequent responses are listed in Table #2 "History of Local Limits Based on Percent Removal". The 1997 local limit submission data and removal rates in Table #2, with small corrections, represent the correct figures the County should have used in the proposed local limit calculations. Incorrect assumptions (as discussed in earlier correspondence) were made in the selection of the December 1998 and November 1998 removal rates used in the calculations for Cr (T), Cu and Pb. These rates do not represent the actual plant removal efficiencies and will provide local limits that would be too conservative and unnecessarily stringent. After reviewing our January 8, 2001 letter it has been determined that a data transposition error was made and the mean removal efficiencies based on the 1997 influent and effluent data as listed on table D1 should be 74.7% for Cr (T), 71.0 % for Cu and 82.8 % for Pb. Based on the comparison of the data in Table #1, the proposed local limits can be used, and will provide adequate compliance limitations for the industrial permittees.

187A OLD CHURCHMANS ROAD, NEW CASTLE, DE 19720 PHONE: 302-395-5700 FAX: 302-395-5797

POINT #2 Limit Calculations for Chromium, Copper and Lead

Upon further review of previous submissions, and based on your comments, we have reviewed our calculations and find the removal rates for these specific constituents to be correct. As stated previously, incorrect and overly conservative assumptions were made in the 1998 submission and the County feels that using the actual removal rates and the 1998 domestic background data will create local limits that will provide for industrial compliance. The local limit calculations for Cr, Cu & Pb are based on these removal rates and are shown in Table # 3.

- Based on the 74.7 % removal rate, a background of 0.059 mg/l, and the calculated local limit of 491.80 mg/l, the local limit for total chromium will remain at 1.5 mg/l.

- Based on the 71.0 % removal rate, a background of 0.052 mg/l, and the calculated local limit of 3.38 mg/l, the local limit for copper is proposed to be set at 1.0 mg/l.

- Based on the 82.8 % removal rate, a background of 0.022 mg/l, and the calculated local limit of 19.40 mg/l, the local limit for lead is proposed to be set at 3.0 mg/l.

POINT #3 1997 and 1998 Domestic Background data

Using the May 1998 background domestic data and the actual plant removal efficiency data, the County calculated the local limits for Cr, Cu and Pb. Table #2 shows our current calculation and the historic comparison of the local limits calculations using the different data that has been presented in previous submissions. We agree the background data from the 1998 submission used in your calculations are accurate, but still believe the actual mean removal efficiencies should be used in the calculations.

POINT #4 Removal Rates

The local limit calculations submitted in Tables 4 and 5 are based on the actual plant removal data and the 1997 background domestic data.

POINT #5 As, Cd, Hg, Ni, Zn limits

Using the mean removal efficiencies from Table D1 and the 1997 domestic background data from Tables 4 and 5 the local limits for As, Cd, Hg, and Ni are presented below.

- Based on the 16.7 % removal rate, a background of 0.0250 mg/l, and the calculated local limit of 1.12 mg/l, the local limit for arsenic will remain at 1.0 mg/l.
- Based on the 25.0 % removal rate, a background of 0.0126 mg/l, and the calculated local limit of 0.04 mg/l, the local limit for cadmium will remain at 0.015 mg/l.
- Based on the 50.0 % removal rate, a background of 0.0001 mg/l, and the calculated local limit of 0.0027 mg/l, the local limit for mercury will remain at 0.001 mg/l.
- Based on the 60.6 % removal rate, a background of 0.1370 mg/l, and the calculated local limit of 3.78 mg/l, the local limit for nickel is proposed at 1.00 mg/l.
- Based on the 65.0 % removal rate, a background of 0.069 mg/l, and the calculated local limit of 22.56 mg/l, the local limit for zinc is proposed at 1.00 mg/l.

POINT #6 BOD, TSS & Ammonia local limits

BOD, TSS, NH3 limits listed in Table # 6 will be established in the updated Industrial Pretreatment Regulations as proposed and approved.

Should you have any questions or require further information on this matter, please contact David Bowie at (302) 395-5728.

Sincerely,

James D. Houston
Environmental Compliance Manager

cc: J. Husband/T. Surles, NCC
K. Branner, Town of Middletown, encl
Peder Hansen, DNREC, encl.
David Bowie, NCC, encl.

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TABLE D1 MOT WATER FARM ANALYTICAL RESULTS

Influent

Sample Date	As (mg/L)	Cd (mg/L)	Cr (mg/L)	Cu (mg/L)	Hg (mg/L)	Mo (mg/L)	Ni (mg/L)	Pb (mg/L)	Se (mg/L)	Zn (mg/L)
1/8/97	0.002	0.030	0.01	0.04	0.0002	0.021	0.02	0.02	0.002	0.08
1/15/97	0.002	0.024	0.06	0.06	0.0002	0.005	0.01	0.11	0.002	0.05
1/22/97	0.002	0.013	0.04	0.05	0.0002	0.005	0.01	0.20	0.002	0.12
1/28/97	0.002	0.028	0.09	0.07	0.0002	0.005	0.08	0.04	0.002	0.13
4/21/97	0.002	0.020	0.03	0.08	0.0002	0.080	0.04	0.04	0.002	0.11
4/28/97	0.002	0.020	0.78	0.10	0.0002	0.052	0.28	0.04	0.002	0.13
5/7/97	0.002	0.020	0.37	0.10	0.0002	0.032	0.19	0.02	0.002	0.13
5/15/97	0.002	0.020	0.03	0.03	0.0002	0.065	0.04	0.02	0.002	0.08
5/23/97	0.002	0.020	0.03	0.03	0.0002	0.032	0.04	0.03	0.002	0.07
10/13/97						0.021				0.127
10/14/97						0.066				0.114
10/15/97						0.055				0.126
10/16/97						0.061				0.143
10/17/97						0.034				0.084
Average	0.0012	0.016	0.154	0.062	0.0002	0.038	0.071	0.058	0.001	0.11

Effluent

Sample Date	As (mg/L)	Cd (mg/L)	Cr (mg/L)	Cu (mg/L)	Hg (mg/L)	Mo (mg/L)	Ni (mg/L)	Pb (mg/L)	Se (mg/L)	Zn (mg/L)
11/13/96		0.02		0.04			0.07			0.25
4/21/97	0.002	0.02	0.07	0.02	0.0002	0.039	0.04	0.02	0.002	0.36
4/28/97	0.002	0.02	0.08	0.02	0.0002	0.032	0.04	0.02	0.002	0.34
5/7/97	0.002	0.02	0.03	0.01	0.0004	0.067	0.04	0.02	0.002	0.03
5/15/97	0.002	0.02	0.03	0.01	0.0002	0.035	0.04	0.02	0.002	0.26
5/23/97	0.002	0.02	0.03	0.02	0.0002	0.019	0.04	0.02	0.002	0.04
10/13/97						0.061				0.02
10/14/97						0.04				0.47
10/15/97						0.055				0.39
10/16/97						0.04				0.45
10/17/97						0.055				0.45
Average	0.001	0.012	0.039	0.018	0.00010	0.044	0.028	0.01	0.001	0.2791

Note: The underlined values indicate the parameter was less than the detection limit.
In accordance with EPA guidelines one-half of the underlined value was used in calculating the average.

Mean Removal Efficiencies (%)

	As	Cd	Cr-T	Cu	Hg	Mo	Ni	Pb	Se	Zn
	16.7	25	74.7	71.0	50	-16.1	60.6	82.8	0	-161.5
1991 EPA Literature		38	65	58			19			65

TABLE # 1

MOT PROPOSED LOCAL LIMITS

(mg/l)	CURRENT LIMITS	PROPOSED LIMITS(mg/l)
Al	1.50	NONE
As	1.00	1.00
Be	0.0070	NONE
Cd	0.015	0.015
CrVI	0.50	0.50
Cr (T)	1.50	1.50
Cu	0.15	1.00
Cn (T)	0.30	NONE
FE	NONE	NONE
Pb	0.50	3.00
Hg	0.001	0.001
Mo	NONE	NONE
Ni	0.02	1.00
Se	0.25	NONE
Ag	0.015	0.015
Tl	5.00	NONE
Zn	1.00	1.00
NH4	35	35
TKN	N/A	15
P	N/A	45
PCB	0.0001	ND
Phenol	10	10
BOD	350	350
TSS	500	500

TABLE # 2

LOCAL LIMITS, BACKGROUND DATA AND PERCENT REMOVAL SUMMARY

Oct-97

(mg/l)	% Removal As Submitted 1997 Table	Actual % Removal	Domestic Background	CALCULATED LOCAL LIMIT mg/l	PROPOSED LIMIT	MOT CURRENT LIMIT
Cr, T	70	70	0.013	416.27	1.5	1.50
Cu,T	74	74.2	0.081	3.12	3.0	0.15
Pb,T	65	65.4	0.01	4.21	4.0	0.50

May-97

Nov-98

(mg/l)	% Removal As Submitted 1998 Table E1	Assumed % Removal	Domestic Background	CALCULATED LOCAL LIMIT	PROPOSED LIMIT	MOT CURRENT LIMIT
Cr, T	35.5	35.5	0.059	162.94	1.5	1.50
Cu,T	41	41	0.052	0.55	0.5	0.15
Pb,T	28.5	28.5	0.022	1.19	1.15	0.50

May-98

Dec-98

(mg/l)	% Removal As Submitted 1998 Table E1	Assumed % Removal	Domestic Background	CALCULATED LOCAL LIMIT	PROPOSED LIMIT	MOT CURRENT LIMIT
Cr, T	35.5	35.5	0.059	162.94	1.5	1.50
Cu,T	41	41	0.052	0.498	0.5	0.15
Pb,T	28.5	28.5	0.022	1.192	1.15	0.50

May-98

Jan-01

(mg/l)	% Removal As Submitted 2001 Table #4	Actual % Removal	Domestic Background	CALCULATED LOCAL LIMIT	PROPOSED LIMIT	MOT CURRENT LIMIT
Cr, T	74.7	74.7	0.005	493.4	1.5	1.50
Cu,T	71	71	0.066	3.0	3.0	0.15
Pb,T	83.3	83.3	0.009	19.8	4.0	0.50

1997 1997

Feb-01 CURRENT CALCULATION

(mg/l)	% Removal As Submitted 2001 Table #4	Actual % Removal	Domestic Background	CALCULATED LOCAL LIMIT	PROPOSED LIMIT	MOT CURRENT LIMIT
Cr, T	74.7	74.7	0.059	491.8	1.5	1.50
Cu,T	71	71	0.052	3.4	3.0	0.15
Pb,T	82.8	82.8	0.022	8.37	3.0	0.50

1997 May-98

TABLE # 3
NON-DOMESTIC EFFLUENT LIMITS

Metal	Present Limits (mg/l)	Influent (mg/L)	Effluent (mg/L)	% Removal	Allowable Effluent Conc. (mg/L)	Allowable Influent Conc.(mg/l)	Total Influent Flow (MGD)	Industrial Influent Flow (MGD)	Domestic Flow (MGD)
Chromium (VI)	0.50	N/A		*70%	0.016	0.02	0.5	0.016	0.484
Chromium (T)	1.50	0.154	0.039	74.7%	4.000	15.79	0.5	0.016	0.484
Copper	0.15	0.062	0.018	71.0%	0.046	0.16	0.5	0.016	0.484
Lead	0.50	0.0580	0.010	82.8%	0.050	0.29	0.5	0.016	0.484

***BASED ON EPA LITERATURE**

Metal	Allowable Influent Conc (mg/l)	Allowable Influent Load (lbs/day)	Domestic Concentration. (mg/l)	Domestic Load (lbs/day)	Allowable Industrial Load (lbs/day)	Allowable Industrial Conc. (mg/l)
Chromium (VI)	0.02	0.07	0.0020	0.0081	0.06	0.44
Chromium (T)	15.79	65.86	0.0590	0.2382	65.63	491.80
Copper	0.16	0.66	0.0520	0.2099	0.45	3.38
Lead	0.29	1.21	0.0220	0.0888	1.12	8.40

Present Limits (mg/l)	Proposed Limits (mg/l)
0.50	0.50
1.50	1.50
0.15	1.00
0.50	3.00

TABLE # 4

NON-DOMESTIC EFFLUENT LIMITS

Metal	Present Limits (mg/l)	Influent (mg/L)	Effluent (mg/L)	% Removal	Allowable Effluent Conc. (mg/L)	Allowable Influent Conc.(mg/l)	Total Influent Flow (MGD)	Industrial Influent Flow (MGD)	Domestic Flow (MGD)
Aluminum	1.50	N/A		N/A					
Arsenic	1.00	0.002	0.001	16.7%	0.050	0.0600	0.5	0.016	0.484
Beryllium	0.007	N/A							
Cadmium	0.16	0.016	0.012	25.0%	0.010	0.0133	0.5	0.016	0.484
Chromium (VI)	0.50	N/A		70.0%	0.016	0.0533	0.5	0.016	0.484
Chromium (T)	1.50	0.154	0.039	74.7%	4.000	15.79	0.5	0.016	0.484
Copper	0.15	0.062	0.018	71.0%	0.046	0.1584	0.5	0.016	0.484
Cyanide	0.30	N/A							
Iron	NONE								
Lead	0.50	0.058	0.010	82.8%	0.050	0.2907	0.5	0.016	0.484
Mercury	0.001	0.0002	0.0001	50.0%	0.000091	0.0002	0.5	0.016	0.484
Molybdenum	NONE	0.038							
Nickel	0.02	0.071	0.028	60.6%	0.100	0.2536	0.5	0.016	0.484
Selenium	0.25	N/A							
Silver	0.02	N/A	N/A	85.0%	0.001	0.0067	0.5	0.016	0.484
Thallium	5.00	N/A							
Zinc	1.00	0.100	0.206	**65.0%**	0.276	0.7886	0.5	0.016	0.484

1997 Data EPA %*

Underlined values indicate parameter was below detection limit.

* The county will use EPA data for the zinc local limit calculation

TABLE # 5

NON-DOMESTIC EFFLUENT LIMITS

Metal	Allowable Influent Conc. (mg/l)	Allowable Influent Load (lbs/day)	Domestic Concentration. (mg/l)	Domestic Load (lbs/day)	Allowable Industrial Load (lbs/day)	Allowable Industrial Conc. (mg/l)
Aluminum	N/A					N/A
Arsenic	0.060	0.250	0.0250	0.101	0.149	1.12
Beryllium						
Cadmium	0.013	0.056	0.0126	0.051	0.005	0.04
Chromium (VI)	0.053	0.222	0.0000	0.000	0.222	1.67
Chromium (T)	15.795	65.865	0.0590	0.238	65.626	491.80
Copper	0.158	0.661	0.0520	0.210	0.451	3.38
Cyanide						
Iron						
Lead	0.291	1.212	0.0220	0.089	1.123	8.42
Mercury	0.000182	0.001	0.0001	0.000404	0.00036	0.0027
Molybdenum						
Nickel	0.254	1.057	0.1370	0.553	0.504	3.78
Selenium						
Silver	0.007	0.028	0.0050	0.020	0.008	0.057
Thallium						
Zinc	0.789	3.288	0.0690	0.279	3.010	22.56

TABLE # 6

CONVENTIONAL POLLUTANT LOADING

MOT DESIGN & DEVELOPMENT REPORT PLANT LOADING

	DESIGN INFLUENT mg/l	DESIGN EFFLUENT mg/l
NH3	18.1	
TKN	40	
BOD	231	16
P	6	
TSS	342	30

MOT AVERAGE PLANT LOADING

	INFLUENT mg/l	EFFLUENT mg/l	REMOVAL EFFICIENCY %	PERMIT EFFLUENT mg/l	PERMIT MAHC mg/l	PERMIT MAHL lbs/day
NH3						
TKN	14.51	0.85	94	3.6 / 2.5	42	174
BOD	136	5	96	13 / 8.3	208	865
P	11.2	1	91	1.0 / 0.5	11	46 23
TSS	110	7	94	23 / 15	250	1043
				max / ave		

MAHC= Maximum Allowable Headworks Concentration

MAHC is based on the average permit limit

MOT LIMIT CALCULATION

	INDUSTRIAL FLOW (MGD)	1.2 (IND) FLOW (MGD)	INFLUENT FLOW (MGD)	DOMESTIC FLOW (MGD)	DOMESTIC Concentration mg/l	DOMESTIC Loading lbs/day	PERMIT MAHL lbs/day	PLANT LOADING REMAINING lbs/day	1.2 (IND) FLOW (MGD)	Maximum INDUSTRIAL Concentration mg/l	CURRENT LOCAL LIMIT mg/l	PROPOSED LOCAL LIMIT mg/l
NH3										35	35	35
TKN	0.0235	0.0282	0.5	0.4718	40	167	174	7	0.0282	30	***n/a***	***15***
BOD	0.0235	0.0282	0.5	0.4718	173	721	865	145	0.0282	615	350	350
P	0.0235	0.0282	0.5	0.4718	6	25	~~46~~ 23	21	0.0282	91	***n/a***	***45***
TSS	0.0235	0.0282	0.5	0.4718	185	771	1043	271	0.0282	1152	500	500

1.2 IND FLOW IS A FACTOR USED TO ANTICIPATE INDUSTRIAL GROWTH

EFFLUENT FILTERS ARE FACTORED IN REMOVAL EFFICIENCY

THOMAS P. GORDON
COUNTY EXECUTIVE

JOSEPH J. FREEBERY
GENERAL MANAGER

DEPARTMENT OF SPECIAL SERVICES

June 20, 2001

John Lovell
Pretreatment Coordinator
US EPA Region III
1650 Arch Street
Philadelphia, PA 19103-2029

RE: MOT Zinc Levels
NPDES Permit No DE0050547

Dear Mr. Lovell:

As previously discussed, we have completed the zinc analysis on the influent and effluent of the treatment plant. In addition, we performed zinc analysis on the spray effluent samples that are collected prior to chemical addition. Our study on the influent, effluent, and spray effluent was conducted from April to December 2000.

The enclosed data indicates the alum used for coagulation in the filtration process is a significant source of zinc. The typical removal efficiency at the lagoon #3 effluent prior to the alum addition exceeds 90 %. As the zinc is being contributed by a facility process, the local limits used to control industrial contributions will be determined using the plant removal efficiency prior to filtration. Please refer to Table # 1 for the Zinc local limit calculation.

Based on the enclosed calculations and the current industrial zinc contributions, we propose to retain the zinc local limit at the current level.

We will check with our chemical supplier to determine if they can provide a higher quality liquid Alum that may possibly contain lower concentrations of zinc.

Should you have any questions or require further information on this matter, please contact David Bowie at (302) 395-5728.

Sincerely,

James D. Houston
Environmental Compliance Manager

cc: Jonathan Husband/Tracey Surles/ encl, File
K. Branner, Town of Middletown, encl
Peder Hansen, DNREC, encl.

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187A OLD CHURCHMANS ROAD, NEW CASTLE, DE 19720 PHONE: 302-395-5770 FAX: 302-395-5797

ZINC MASS BALANCE											
Month	Average Influent Flow MGD	Average Influent Conc. mg/l	Influent loading lbs	lagoon #3 Effluent to spray MGD	lagoon # 3 Effluent Conc. mg/l	lagoon # 3 Effluent to spray lbs	% Removal	Average Filter Effluent MGD	Average Filter Effluent mg/l	Filter Effluent lbs	ZINC added by filter process lbs
Apr-00	0.620	0.097	0.502	0.863	0.005	0.036	93	0.190	0.082	0.130	**0.094**
May-00	0.570	0.104	0.492	0.676	0.006	0.034	93	0.120	0.094	0.094	**0.061**
Jun-00	0.510	0.088	0.372	0.387	0.006	0.019	95				
Jul-00	0.520	0.214	0.928								
Aug-00	0.560	0.010	0.047	0.875	0.008	0.058	-25	0.123	0.079	0.081	**0.022**
Sep-00	0.870	0.073	0.529					0.420	0.073	0.255	
Oct-00	0.570	0.002	0.011	0.664	0.002	0.011	-4	0.480	0.052	0.207	**0.196**
Nov-00	0.430	0.034	0.122					0.490	0.030	0.124	
Dec-00	0.480	0.075	0.300					0.480	0.051	0.203	
	0.570	**0.077**	**0.367**		**0.005**	**0.032**	**50**	**0.3290**	**0.0658**	**0.1564**	**0.093**

Mot Weekly Zinc Analysis
Influent and Effluent

Date	Influent mg/l	Stream Effluent mg/l	Mot Spray Eff. mg/l
5-Apr-00	0.113	0.021	
12-Apr-00	0.113	0.105	0.005
19-Apr-00	0.052	0.092	
26-Apr-00	0.110	0.111	
3-May-00	0.111	0.102	
10-May-00	0.111	0.089	0.006
17-May-00	0.093	0.108	
24-May-00	0.102	0.077	
31-May-00	0.101	0.096	
7-Jun-00	0.080	0.170	
14-Jun-00	0.080	0.080	
21-Jun-00	0.100	NO FLOW	
28-Jun-00	0.090	NO FLOW	
5-Jul-00	0.280	NO FLOW	
12-Jul-00	0.152	NO FLOW	
19-Jul-00	0.451	NO FLOW	0.008
26-Jul-00	0.214	NO FLOW	
2-Aug-00	0.013	NO FLOW	
9-Aug-00	0.011	NO FLOW	
16-Aug-00	0.012	0.060	
23-Aug-00	0.013	0.095	
30-Aug-00	0.010	0.081	
6-Sep-00	0.003	0.021	
13-Sep-00	0.017	0.118	0.569
20-Sep-00	0.023	0.083	
27-Sep-00	0.093	0.052	
4-Oct-00	0.002	0.054	0.018
11-Oct-00	0.003	0.051	
18-Oct-00	0.002	0.053	0.002
25-Oct-00	0.002	0.049	
2-Nov-00	0.045	0.031	
8-Nov-00	0.021	0.002	0.002
15-Nov-00	0.014	0.025	
22-Nov-00	0.056	0.063	
6-Dec-00	0.007	0.053	
13-Dec-00	0.018	0.037	
20-Dec-00	0.043	0.068	
27-Dec-00	0.075	0.045	
AVE	0.075	0.070	0.087

MOT ZINC REMOVAL EFFICENCY COAGULATION/FILTRATION INCLUDED PLANT EFFLUENT STREAM DISCHARGE Monthly Average Conc. mg/l			
Month	Influent	Effluent	% Removal
Apr-00	0.097	0.082	15
May-00	0.104	0.094	9
Jun-00	0.088		
Jul-00	0.274		
Aug-00	0.012	0.079	-567
Sep-00	0.034	0.073	-114
Oct-00	0.002	0.052	-2200
Nov-00	0.034	0.030	11
Dec-00	0.036	0.051	-42
AVE	**0.076**	**0.066**	**13**

TABLE #1 MOT 2000 ZINC LIMIT CALCULATION

Metal	Present Limit (mg/l)	Influent (mg/L)	Effluent (mg/L)	% Removal	Allowable Effluent Conc. (mg/L)	Allowable Influent Conc (mg/l)	Total Influent Flow (MGD)	Industrial Influent Flow (MGD)	Domestic Flow (MGD)
Zinc	1.00	0.378	0.054	85.7%	0.276	1.9320	0.5	0.016	0.484
		0.076		78.90		0.394			

Allowable Influent Conc. (mg/l)	Allowable Influent Load (lbs/day)	Domestic Concentration (mg/l)	Domestic Load (lbs/day)	Allowable Industrial Load (lbs/day)	Allowable Industrial Conc. (mg/l)	PROPOSED Limit (mg/l)
1.932	8.056	0.1100	0.444	7.612	57.05	1.00
0.394	1.643			1.199	8.99	

THOMAS P. GORDON
COUNTY EXECUTIVE

JOSEPH J. FREEBERY
GENERAL MANAGER

DEPARTMENT OF SPECIAL SERVICES

January 8, 2001

John Lovell
Pretreatment Coordinator
US EPA Region III
1650 Arch Street
Philadelphia, PA 19103-2029

RE: Pretreatment Program Local Limits Submission.
NPDES Permit No DE0050547

Dear Mr. Lovell:

Thank you for your letter regarding the New Castle County pretreatment program, in which you outlined specific comments regarding the status of the program. The County has reviewed these comments and will address each comment in our response outlined below:

Pollutants of Concern

To support the continued absence of a cyanide limit the County will sample the effluent from all industrial permittees at least annually to ensure that the industrial dischargers do not generate cyanide.

Sludge Disposal

As stated in your July 3, 2000 letter, the use of land application sludge standards is not required at this time and the MAHCs are based on effluent and inhibition criteria.

Removal Rates

Chromium, Copper and Lead:

As suggested in your letter we have reevaluated the removal rates for Cr, Cu and Pb in terms of long-range enforcement and decided to calculate the local limits based on the actual plant removal efficiencies. Please refer to Table #2 "Local Limits Based on Percent Removal" table for a comparison of the different MOT removal rates for Cr, Cu and Pb and refer to Table #3 "History of Proposed Local Limits" for historic limit proposals.

Tables #5 & #6 "INDUSTRIAL SAMPLING DATA" show the seven-year SMR data average compared to the current local limits and the 1997 and 1998 proposed local limits. Based on the comparison of the data, the limits proposed in the 1997 submittal can be used and will provide compliance limitations for the industrial permittees.

187A OLD CHURCHMANS ROAD, NEW CASTLE, DE 19720 PHONE: 302-395-5700 FAX: 302-395-5787

Zinc

As discussed in our April 20, 2000 letter, we are currently conducting zinc analysis on the influent and effluent to the plant. In addition, we are performing zinc analysis on the spray effluent samples that are collected prior to chemical addition. The initial data indicates the alum used for chemical addition is a significant source of zinc in the effluent. Tests on the alum solution show zinc to be present at 1.2 mg/l. Our study on the influent, effluent, and spray effluent was started on April 5th and continued until June 14th of 2000. After June 14th, 2000, zinc analysis was performed on the influent and spray effluent only, due to the temporary reduction of the stream discharge caused by restrictive seasonal TMDL's. Presently, we have 2 ½ months of data collected and will continue our analysis for another 3 ½ months after the restart of stream discharge. At the conclusion, we will submit the data that will compare the filtered effluent to the unfiltered effluent and we will use the data to determine the actual zinc removal efficiencies. This data will be used to calculate the MAHC for zinc using effluent criteria. Meanwhile, we are proposing to retain the Zinc limit at the current level.

PCB's

A no discharge limitation for PCB's is proposed as the local limit.

Ammonia, BOD, TSS

The proposed local limitations for these parameters are based on the design loading of the plant and the maximum permitted effluent limitation as shown on Table #7 "Conventional Pollutant Loadings" and # 8 "Historic Industrial BOD and TSS Loadings". The industrial flow and loading contributions were calculated and the remaining plant design flow was used to determine the amount the industries could load the facility based on the plant removal efficiencies and the plant permit limits. As the proposed local limits are lower than the calculated MAHCs this should provide an adequate safety factor to prevent industrial contributions from causing process upset or pass through. The limitation on Ammonia is based on engineering judgement relative to sewer worker's safety considerations.

CODE ADOPTION

The attached draft revision to NCC Code has been submitted to our law department for approval. Assuming that these proposed revisions are approved by the EPA by March, 2001, we expect to adopt the revised limits by May 30, 2001. The Mayor and Council of Middletown generally adopts revisions to their Pretreatment Program by referencing the revised NCC Code.

Should you have any questions or require further information on this matter, please contact David Bowie at (302) 395-5728.

Sincerely,

James D. Houston
Environmental Compliance Manager

cc: David Hofer, NCC
Tracey Surles, NCC
K. Branner, Town of Middletown, encl
Peder Hansen, DNREC, encl.
David Bowie, NCC, encl.

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TABLE # 1

MOT PROPOSED LOCAL LIMITS

(mg/l)	CURRENT LIMITS	PROPOSED LIMITS	1998	1997
Al	1.50	N/A		
As	1.00	1.00	0.83	3.0
Be	0.0070	N/A		
Cd	0.015	0.5	0.01	0.5
Cr (T)	1.50	1.50	1.5	1.5
CrVI	0.50	0.50		0.5
Cu	0.15	3.00 ✓	0.5	3
Pb	0.50	4.00 ✓	1.15	4
Hg	0.001	0.001	0.0002	.0025
Mo	none	N/A		
Ni	0.02	10	0.25	10
Se	0.25	N/A		
Ag	0.015	0.015	0.035	0.015
Tl	5.00	N/A		
Zn	1.00	1.00 ✓	0.7	0.85
NH4	35.00	35.00	35	35
Cn-, tot	0.30	N/A		
PCB	0.0001	ND	0	
Phenol	10.00	10.00		10
BOD	350	350	350	500
TSS	500	500	500	500

TABLE # 2

LOCAL LIMITS BASED ON PERCENT REMOVAL

1997

(mg/l)	% Removal As Submitted 1997 Table	PRELIM % Removal	PRELIM LIMIT	PROPOSED LIMITS	MOT CURRENT LIMITS
Cr, T	70	70	416	1.5	1.50
Cu,T	74	74	3.12	3.0	0.15
Pb,T	65	65	4.21	4.0	0.50

1998

(mg/l)	% Removal As Submitted 1998 Table E1	PRELIM % Removal	PRELIM LIMIT	PROPOSED LIMITS	MOT CURRENT LIMITS
Cr, T	35.5	35.5	162.94	1.5	1.50
Cu,T	41	41	0.498	0.5	0.15
Pb,T	28.5	28.5	1.192	1.15	0.50

TABLE # 3

HISTORY OF PROPOSED LOCAL LIMITS

(mg/l)	MOT CURRENT LIMITS	Oct-97 PROPOSED LIMITS	Oct-97 PRELIM	1998 PROPOSED LIMITS	1998 PRELIM
Al	**1.50**	N/A	N/A	N/A	N/A
As	**1.00**	3	3.110	0.800	0.830
Be	**0.0070**	0.2	0.250	N/A	N/A
Cd	**0.015**	0.5	0.530	0.010	0.000
Cr (T)	**1.50**	1.5	416	1.500	162.94
CrVI	**0.50**	0.5	1.67	N/A	0.508
Cu	**0.15**	3	3.120	0.500	0.500
Pb	**0.50**	4	4.210	1.150	1.190
Hg	**0.001**	0.0025	0.0028	0.0002	0.0002
Mo	**none**	0.2	0.200	N/A	N/A
Ni	**0.02**	10	10.170	0.250	0.280
Se	**0.25**	0.35	0.350	N/A	N/A
Ag	**0.015**	0.015	0.003	0.035	0.038
Tl	**5.00**	0.1	0.110	N/A	N/A
Zn	**1.00**	0.85	0.860	0.700	0.716
NH4	**35.00**	35	N/A	35	N/A
Cn-, tot	**0.30**	0.3	0.320	N/A	N/A
PCB	**0.0001**	N/A	0.170	0.000	N/A
Phenol	**10.00**	10	N/A	N/A	N/A
BOD	**350**	500	N/A	350	N/A
TSS	**500**	500	N/A	500	N/A

TABLE # 4
1997 NON-DOMESTIC EFFLUENT LIMITS

Metal	Present Limits (mg/l)	Influent (mg/L)	Effluent (mg/L)	% Removal	Allowable Effluent Conc. (mg/L)	Allowable Influent Conc.(mg/l)	Total Influent Flow (MGD)	Industrial Influent Flow (MGD)	Domestic Flow (MGD)
Chromium (VI)	0.50	N/A		**70.0%**	0.016	0.0533	0.5	0.016	0.484
Chromium (T)	1.50	0.154	0.039	74.7%	4.000	15.7949	0.5	0.016	0.484
Copper	0.15	0.062	0.018	71.0%	0.046	0.1584	0.5	0.016	0.484
Lead	0.50	0.060	0.010	83.3%	0.107	0.6420	0.5	0.016	0.484

EPA %

Metal	Allowable Influent Conc. (mg/l)	Allowable Influent Load (lbs/day)	Domestic Concentration. (mg/l)	Domestic Load (lbs/day)	Allowable Industrial Load (lbs/day)	Allowable Industrial Conc. (mg/l)
Chromium (VI)	0.0533	0.2224	0.0020	0.0081	0.2143	1.6
Chromium (T)	15.7949	65.8646	0.0050	0.0202	65.84	493.4
Copper	0.1584	0.6607	0.0660	0.2664	0.3943	3.0
Lead	0.6420	2.6771	0.0090	0.0363	2.6408	19.8

Present Limits (mg/l)	Proposed Limits (mg/l)
0.50	0.50
1.50	1.50
0.15	3.00
0.50	4.00

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TABLE # 5

INDUSTRIAL SMR DATA

JOHNSON CONTROLS,INC

(mg/l)	MOT CURRENT LIMITS	PROPOSED LIMITS	SAMPLING DATA 1997	1998	1999
Al	**1.50**	**N/A**			
As	**1.00**	**1.00**	0.002	0.005	0.002
Be	**0.0070**	**N/A**			
Cd	**0.015**	**0.5**	0.007	0.005	0.004
Cr (T)	**1.50**	**1.50**	0.008	0.011	0.008
CrVI	**0.50**	**0.50**			
Cu	**0.15**	**3.00**	0.004	0.0415	0.088
Pb	**0.50**	**4.00**	0.522	0.576	0.846
Hg	**0.001**	**0.001**	0.0002	0.0002	0.0003
Mo	**none**	**N/A**	0.682	0.132	0.075
Ni	**0.02**	**1.00**	0.031	0.059	0.045
Se	**0.25**	**N/A**	0.003	0.004	0.002
Ag	**0.015**	**0.015**			
Tl	**5.00**	**N/A**			
Zn	**1.00**	**1.00**	0.021	0.026	0.011
NH4	**35**	**35**			
Cn-, tot	**0.30**	**N/A**			
PCB	**0.0001**	**ND**			
Phenol	**10**	**10**			
BOD	**350**	**350**	81	60	77
TSS	**500**	**500**	17	12	15

TABLE # 6

INDUSTRIAL SMR DATA

MACDERMID IMAGING, INC

(mg/l)	MOT CURRENT LIMITS	PROPOSED LIMITS	SAMPLING DATA 1997	1998	1999
Al	**1.50**	**N/A**			
As	**1.00**	**1.00**	0.0063	0.0022	0.005
Be	**0.0070**	**N/A**			
Cd	**0.015**	**0.5**	0.0063	0.0022	0.004
Cr (T)	**1.50**	**1.50**	0.0187	0.0059	0.005
CrVI	**0.50**	**0.50**			
Cu	**0.15**	**3.00**	0.031	0.0253	0.02
Pb	**0.50**	**4.00**	0.028	0.0154	0.0145
Hg	**0.001**	**0.001**	0.0002	0.00013	0.0005
Mo	**none**	**N/A**	0.031	0.008	0.05
Ni	**0.02**	**1.00**	0.031	0.0065	0.02
Se	**0.25**	**N/A**	0.0015	0.0027	0.005
Ag	**0.015**	**0.015**			
Tl	**5.00**	**N/A**			
Zn	**1.00**	**1.00**	0.263	0.414	0.34
NH4	**35**	**35**			
Cn-, tot	**0.30**	**N/A**			
PCB	**0.0001**	**ND**			
Phenol	**10**	**10**			
BOD	**350**	**350**	116	1038	371
TSS	**500**	**500**	6	210	32

TABLE # 7

CONVENTIONAL POLLUTANT LOADING

MOT DESIGN & DEVELOPMENT REPORT PLANT LOADING

	DESIGN INFLUENT mg/l	DESIGN EFFLUENT mg/l
NH3	18.1	
TKN	40	
BOD	231	16
P	6	
TSS	342	30

MOT AVERAGE PLANT LOADING

	INFLUENT mg/l	EFFLUENT mg/l	REMOVAL EFFICIENCY %	PERMIT EFFLUENT mg/l	PERMIT MAHC mg/l	PERMIT MAHL lbs/day
NH3						
TKN	14.51	0.85	94	3.6 / 2.5	42	174
BOD	136	5	96	13 / 8.3	208	865
P	11.2	1	91	1.0 / 0.5	11	46
TSS	110	7	94	23 / 15	250	1043
				max / ave		

MAHC= Maximum Allowable Headworks Concentration

MAHC is based on the average permit limit

MOT LIMIT CALCULATION

	INDUSTRIAL FLOW (MGD)	1.2 (IND) FLOW (MGD)	INFLUENT FLOW (MGD)	DOMESTIC FLOW (MGD)	DOMESTIC Concentration mg/l	DOMESTIC Loading lbs/day	PERMIT MAHL lbs/day	PLANT LOADING REMAINING lbs/day	1.2 (IND) FLOW (MGD)	Maximum INDUSTRIAL Concentration mg/l	CURRENT LOCAL LIMIT mg/l	PROPOSED LOCAL LIMIT mg/l
NH3										35	35	35
TKN	0.0235	0.0282	0.5	0.4718	40	167	174	7	0.0282	30	***n/a***	***15***
BOD	0.0235	0.0282	0.5	0.4718	173	721	865	145	0.0282	615	350	350
P	0.0235	0.0282	0.5	0.4718	6	25	46	21	0.0282	91	***n/a***	***45***
TSS	0.0235	0.0282	0.5	0.4718	185	771	1043	271	0.0282	1152	500	500

1.2 IND FLOW IS A FACTOR USED TO ANTICIPATE INDUSTRIAL GROWTH

EFFLUENT FILTERS ARE FACTORED IN REMOVAL EFFICIENCY

1/3/01

TABLE # 8

HISTORIC INDUSTRIAL
BOD AND TSS LOADING (mg/l)

MACDERMID M-85-02		
YEAR	BOD	TSS
1994 NCC	1045	30
1994 NCC	898	105
1994 NCC	525	104
1996 NCC	152	24
1996 NCC	46	51
1996 NCC	393	26
1997 NCC	116	6
1998 NCC	1038	210
2000 NCC	565	81
AVE	531	71

JOHNSON CONTROLS M-85-01		
YEAR	BOD	TSS
1994 NCC	140	16
1994 NCC	23	6
1994 NCC	64	30
1994 NCC	45	18
1996 NCC	1	20
1996 NCC	112	50
1996 NCC	170	3
1996 NCC	52	4
1996 NCC	39	10
1997 NCC	53	13
1997 NCC	109	21
AVE	73	17

DRAFT

SUGGESTED PREAMBLE

Introduced by:

ORDINANCE NO. 01-

TO AMEND CHAPTER 38 OF
THE NEW CASTLE COUNTY CODE RELATING TO
THE REGULATION OF NON-DOMESTIC WASTWATER DISCHARGERS

WHEREAS, New Castle County owns and operates wastewater treatment facilities; and

WHEREAS, New Castle County has an approved industrial pretreatment program pursuant to conditions contained in National Pollutant Discharge Elimination System Permit No. DE0050547, issued by the State of Delaware; and

WHEREAS, Federal regulations governing industrial pretreatment programs, 40 CFR Parts 125 and 403, specifically mandate minimum local legal authority in order to enforce the requirements of the County□s industrial pretreatment program; and

WHEREAS, New Castle County has established local discharge limits on pollutants dicharged onto the Middletown-Odessa-Townsend (MOT) Service Area at NCC CODE Section 38.02.03

WHEREAS, The local discharge limits are required to be revised periodically pursuant to 40 CFR parts 125 and 403 and the U. S. Environmental Protection Agency has conceptually approved the revisions proposed by NCC Department of Special Services.

WHEREAS, the following revisions are proposed in order to bring the New Castle County Code into compliance with federal regulations.

THE COUNCIL OF THE COUNTY OF NEW CASTLE HEREBY ORDAINS:

Section 1. The County of New Castle is revising Chapter 38, Article II, Division 8 of the New Castle County Code by deleting the matter within brackets, and adding the matter underlined in Exhibit □A□.

Section 2. This Ordinance shall become effective immediately upon its adoption.

_____
Approved as to form

_____
President

_____
County Executive

SYNOPSIS: The amendment relates to reporting requirements, discharge permit conditions, and technical details in the implementation of the County's existing industrial pretreatment program.

FISCAL IMPACT: The technical revisions to NCC code will have no fiscal impact on the County and no known fiscal impact on the industrial users

DRAFT

EXHIBIT A

Chapter 38 of the New Castle County Code

REGULATIONS ON NON-DOMESTIC WASTEWATER DISCHARGES INTO THE PUBLIC SEWER SYSTEM

Sec. 38.02.703 Maximum constituents.

(a) *Limitations of concentrations.* The concentration in wastewater of any of the following constituents shall be limited to the following (See also Sec. 38-269):

	INDUSTRIAL POINT SOURCE	
	In MOT Service Area 30-DAY AVERAGE (mg/l)	In Wilmington Service Area 30-DAY AVERAGE (mg/l)
[Aluminum	1.50	-]
Arsenic	1.00	0.24
[Beryllium	0.007	-]
Cadmium	[0.15] 0.50	2.00
Chromium, Total	1.50	4.00
Chromium, VI	0.50	-
Copper	[0.15] 3.0	3.00
Lead	[0.50] 4.00	9.00
Mercury	0.001	0.045
Nickel	[0.02] 10.0	1.00
[Selenium	0.25	-]
Silver	0.015	-
[Thallium	5.00	-]
Zinc	1.00	14.00
Ammonia as Nitrogen	35.00	35.00
Cyanide, Total	[0.3] -	0.49
PCB	[0.0001] ND	-
Phenolics	10.0	10.00
BOD	350	350
Suspended Solids	500	500